

ARIZONA
TELEMEDICINE
PROGRAM



Improving Access to Quality Medical Care Webinar Series

Presented by

The Southwest Telehealth Resource Center, and
Arizona Telemedicine Program

Land Acknowledgement

We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. Committed to diversity and inclusion, the University strives to build sustainable relationships with sovereign Native Nations and Indigenous communities through education offerings, partnerships, and community service.



Welcome

- SWTRC region
- Fellow HRSA Grantees
- All other participants



The Arizona Telemedicine Program, and the Southwest Telehealth Resource Center welcome you to this free webinar series.

The practice & deliver of healthcare is changing, with an emphasis on **improving quality, safety, efficiency, & access to care.**

Telemedicine can help you achieve these goals!

Webinar Tips & Notes

- When you joined the webinar your phone &/or computer microphone was muted
- Time is reserved at the end for Q&A, please use the **Chat function** to ask questions
- Please fill out the post-webinar survey
- Webinar is being recorded
- Recordings will be posted on the ATP website
 - <http://telemedicine.arizona.edu/webinars/previous>



Disclaimer

- The opinions expressed in this presentation and on the following slides are solely those of the presenter and not necessarily those of the organizations sponsoring this webinar. The organizations do not guarantee the accuracy or reliability of the information provided herein.

CONTINUING MEDICAL EDUCATION

Outcome Objectives

- Explain a recent study on the efficacy of telemedicine for chronic HIV
- Describe the clinic personnel and structural features of a telemedicine clinic
- Identify differences in medical, economic, and time-management outcomes comparing both venues

Accreditation Statement

The University of Arizona College of Medicine - Tucson is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

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Disclosure Statement

All Faculty, CME Planning Committee Members, and the CME Office Reviewers have disclosed that they do not have any relevant financial relationships with ineligible companies that could constitute a conflict of interest concerning this CME activity.

Attendance Tracking: Please text the code in the chat to 1-866-327-3062 to log your attendance in the CAMS system. If you have not set up your profile yet, please contact Melanie at mesher@telemedicine.arizona.edu

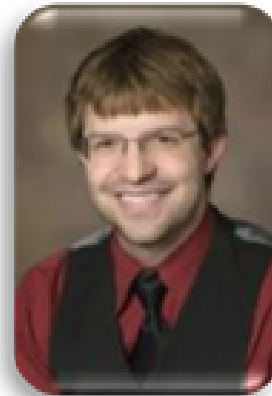


WHAT IS THE BETTER VENUE FOR HIV OUTPATIENT CARE: A BRICK-AND-MORTAR CLINIC OR TELEMEDICINE CLINIC?




Stephen Klotz, MD

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Clinical Pharmacist, Infectious
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College of Medicine



What is the better venue for HIV Outpatient care: a Brick-and-Mortar Clinic or Telemedicine Clinic?

Webinar by:

Stephen A. Klotz, MD and Larry D. York, PharmD

University of Arizona

Tucson, Arizona

Our Current Telemedicine Offerings

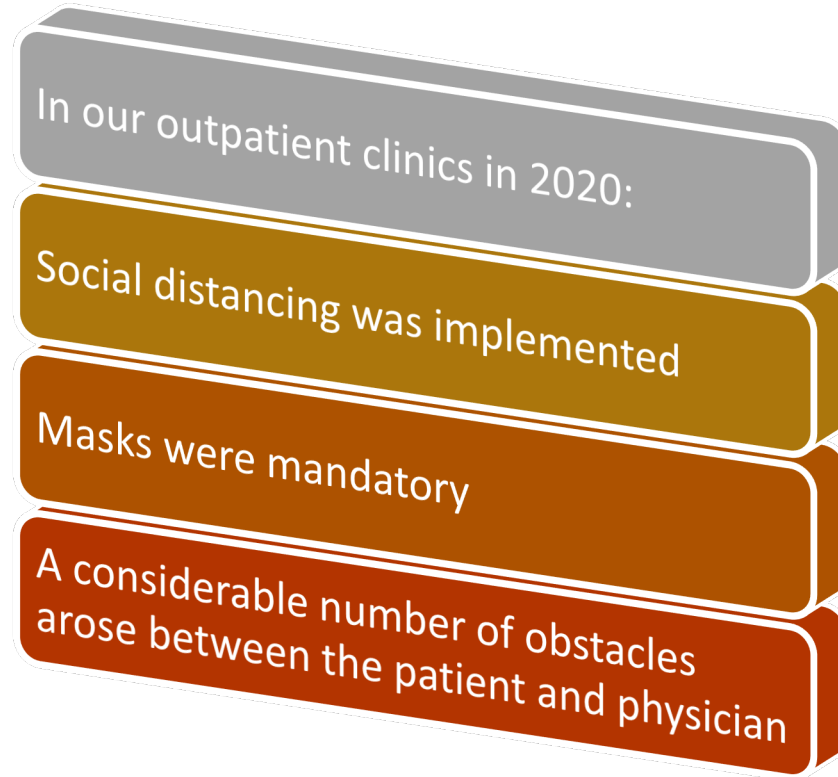
- HIV Telemedicine
- Infectious Diseases Telemedicine
- TelePharmacy
- TelePrEP
- Soon to be launched: TeleGeriatric assessment for HIV patients over 50 years of age

What's our evidence?

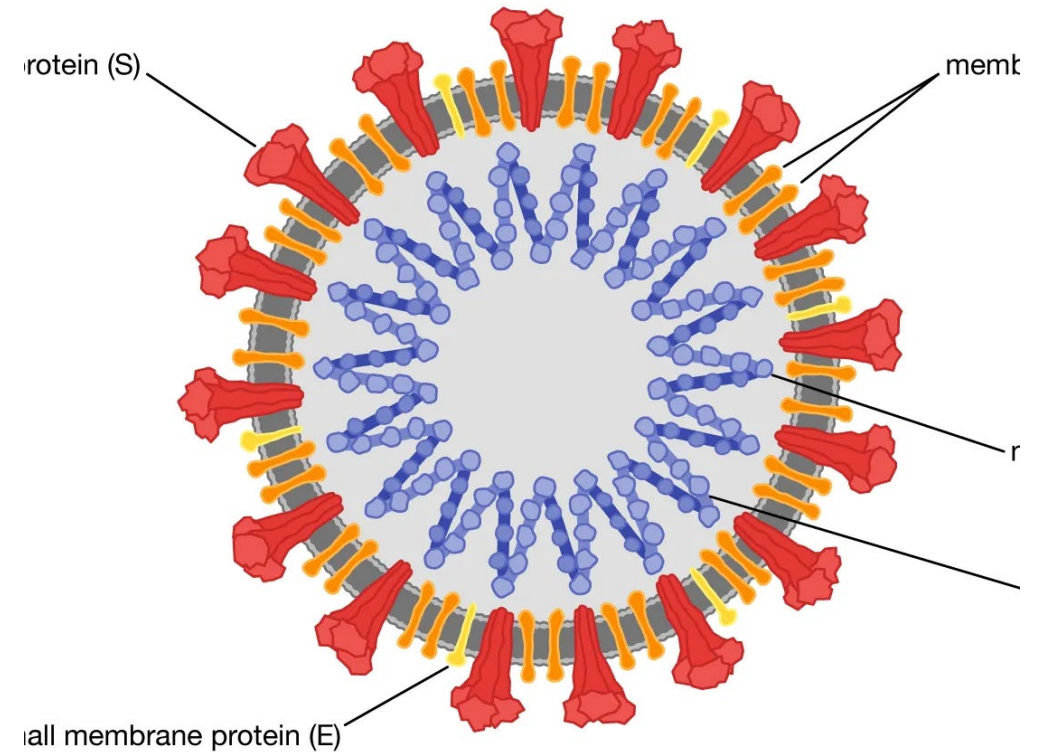
- The Genie is out of the Bottle: Telemedicine is More Effective than Brick-and-Mortar Clinics in the Care of HIV-infected Outpatients.
- Klotz SA, Chan CB, Bianchi S, Egurrola C, York LD. *Am J Med.* 2022 Dec 7:S0002-9343(22)00880-4. doi: 10.1016/j.amjmed.2022.11.012. Epub ahead of print. PMID: 36495936.



COVID 19 and Outpatient Clinics 2020-2022



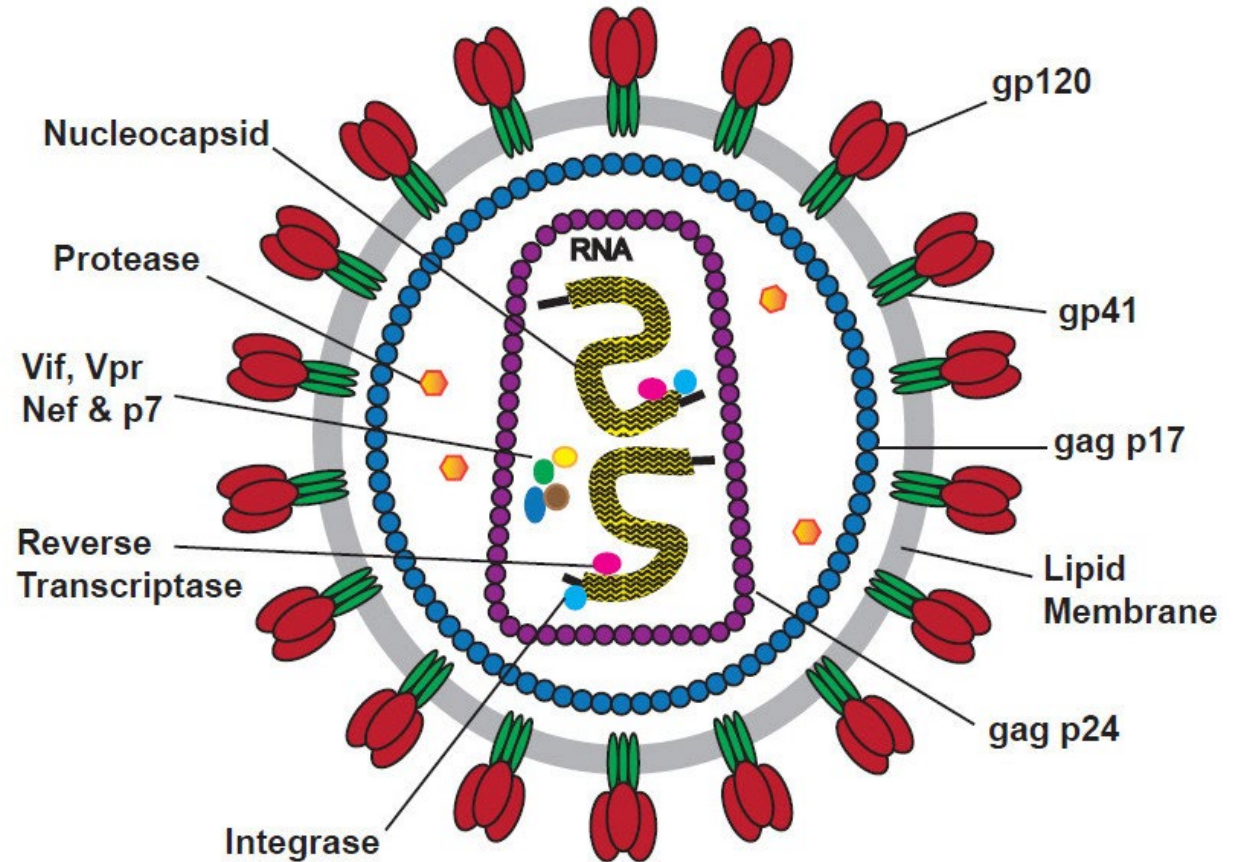
Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)



Britannica, Inc.

The Other Pandemic Virus

- We had years of providing HIV care to incarcerated individuals in Arizona Department of Corrections by Telemedicine
- We quickly instituted our model of Telemedicine, adapting it to non-incarcerated HIV patients

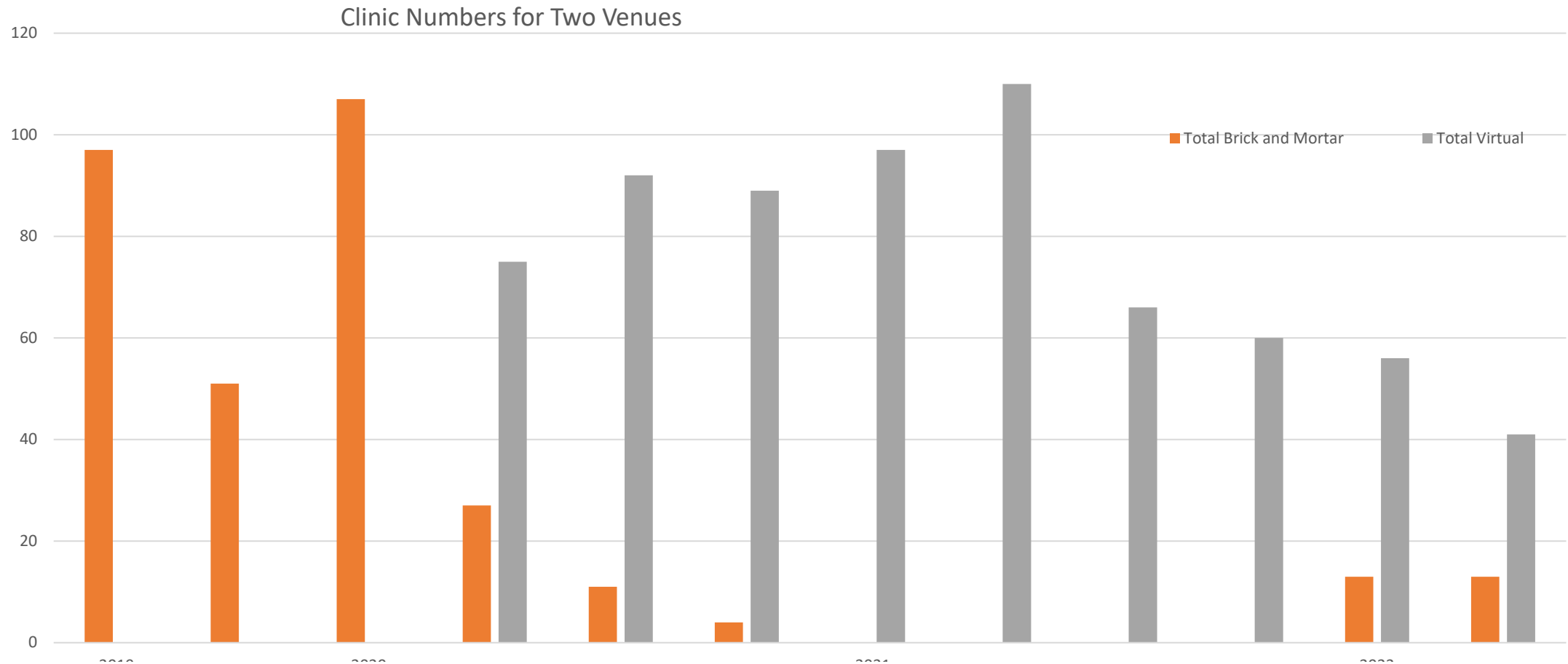


2021

- Brick and Mortar clinics closed
- Telemedicine clinics only were available




Figure 1. Number of patients attending Telemedicine (grey columns) and Brick-and-Mortar (orange columns) clinics by quarter of year (3 months).



The meaning of Figure 1

- There were 974 HIV-patient encounters during the three-year period,
- 670 by Telemedicine and 304 in-person.
- Clinic visits up until the 2nd quarter of 2020 were Brick-and-Mortar at which time Telemedicine clinics became available. Telemedicine was the only venue available venue for all of 2021.

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What we learned early on


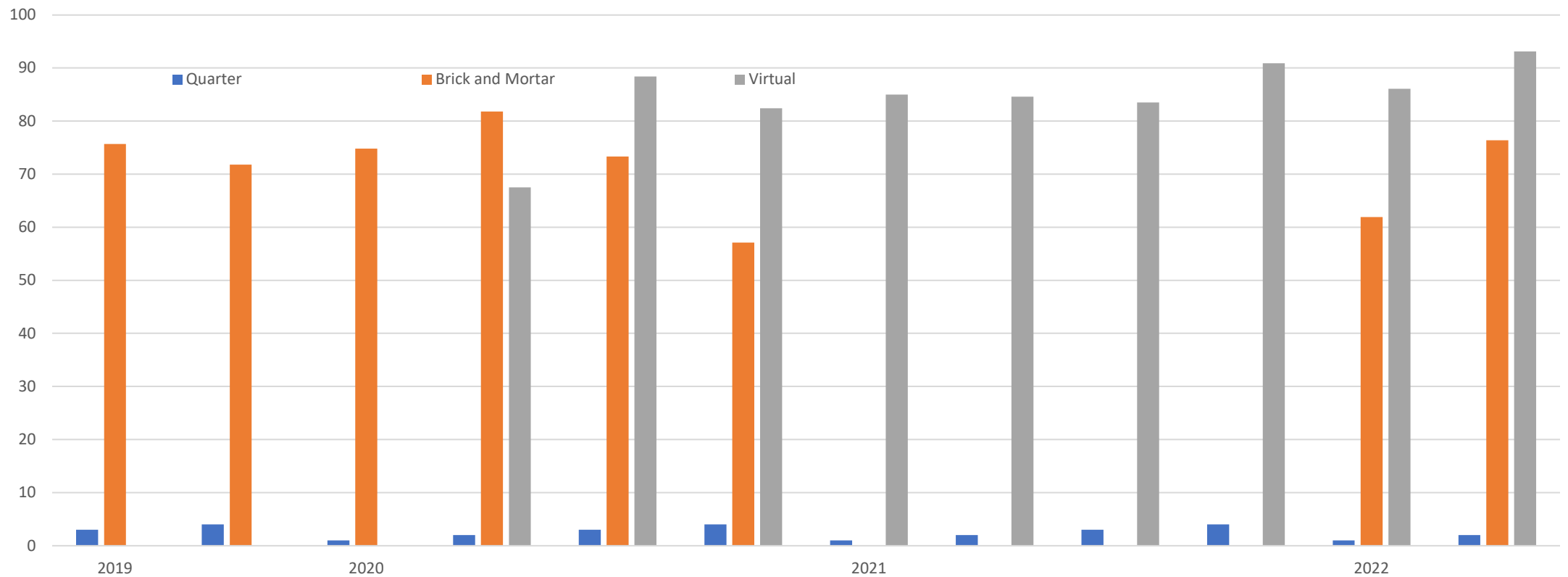
- Telemedicine could be a successful substitute for Brick-and-Mortar clinics
 - Patients became accustomed to being seen on video or virtually
 - The majority of patients in 2022 chose Telemedicine
- 
- A series of four yellow dashed line segments are arranged in a curved, upward-sloping path in the bottom right corner of the slide.

Figure 2. Percentage of patients showing for appointment (showed/scheduled). Telemedicine clinics (grey columns) and Brick-and-Mortar clinics (orange columns) by quarter of year (3 months).



First 7 months of 2022: Patient's choice

- January to July 2022 patients could choose their venue of care
- Click and Order Preferred by Patients and Clinic Personnel over Brick-and-Mortar



The meaning of Figure 2; Attention 2022

- January through July 2022 patients were given the option to choose their clinic venue.
- During 2022 151 patients were scheduled to attend 20 Telemedicine clinics and 143 patients showed (**show rate, 94.7%**). **Fourteen of the 20 clinics had a 100% show rate.** There were 9 return visits in that period.
- For the Brick-and-Mortar clinic, 33 patients were scheduled for 4 clinics and 26 patients showed (show rate, **78.7%**) and no clinic had 100% attendance.

What we learned

The show rate for Telemedicine was always high, >94%.

The show rate for Brick-and-Mortar (even though it was the patient's preferred venue) was <80%.

Thus, less time was wasted using Telemedicine if patients failed to show since the clinic coordinator could control attendance on video.

Who were
the
Telemedicine
Participants?

Patient

Physician

Pharmacist

Clinic Coordinator

Our Telemedicine Team Composition and Responsibilities: Physician



The physician was responsible for the conduct of the visit and medical outcome.



A history was obtained, an appropriate review of systems conducted, and a plan made for future clinic visits.



The physician was responsible for billing based upon time and complexity.

- For some clinics we had students/residents/practitioners observing; so, a good program for the video connection is important

Pharmacist

The pharmacist was responsible for assessing medication adherence,

addressing medication-related adverse effects, reviewing drug interactions, evaluating lab tests

and ensuring patients were up to date on immunizations.

Clinic coordinator

The clinic coordinator was responsible for hosting the virtual session, inviting appropriate staff, coordinating/coaching patients to ensure they could successfully log in, and monitoring the time to prevent the clinic from running late.

During the appointment, the clinic coordinator screened for socio-economic barriers such as financial hardship, behavioral health conditions/substance use disorders, health insurance coverage, and medication copays.

- Sexual health assessment for those at risk for STDs
- Swabs mailed to patient
- Permission obtained to send material by email
- Started each visit with: “Is it okay for all of us to talk with you today”

Patient Characteristics

- The HIV-outpatient population is similar to other HIV clinics in the Southwest. It is one physician's panel accumulated over 22 years. The patient demographic characteristics were similar to those for the entire state of Arizona.

Table 1. Patient Characteristics

- Patients attending the Telemedicine and Brick-and-Mortar clinics January through July 2022. *IVDU: intravenous drug user. There were 134 unique patient visits and 9 return visits within the 7-month period.

Characteristic	Category	N (percentage)
Sex	Men	113 (84%)
	Women	21 (16%)
Risk Factor for HIV	MSM	103 (71)
	Heterosexual	33 (23)
	*IVDU	4 (2)
	Congenital	2 (1)
	Bisexual	2 (1)
	Unknown	1 (1)
Years living with HIV	0-5 years	16%
	5-10 years	21
	10-20	24
	>20	39%

Medical Outcomes

- All but 6 visits during 2022 involved patients with sustained viral control (viral load < 200 copies HIV RNA/μl).
- Four of those six visits involved patients being seen for the first time or who had their ART interrupted and had viral loads in the thousands. These four patients were begun on, or returned to ART, and viral loads were undetectable within several months.
- Two patients, followed over years, had measurable viral loads >200 copies of RNA/μl, due to non-compliance with ART.

Table 2. Diagnoses made at Telemedicine visits, first six months of 2022. *: died following hospitalization.

Disease	Number of Cases
Syphilis	7
Drug Rash	3
Dermatophyte infection	3
Chlamydia	2
Herpes genitalis	1
Tinea versicolor	1
Steroid acne	1
Henoch-Schoenlein Purpura	1
Diabetic ketoacidosis	1
Gonorrhea	1
Pneumocystis pneumonia*	1

Cost-Effectiveness of Telemedicine

- **Costs:** physician, pharmacist, and clinic director were present for all encounters at both venues.
- **Cost Savings:** for the Telemedicine clinics, a large cost savings was achieved because no physical space was required.

The medical assistant, nurse, and two sign-in clerks were not needed nor were parking attendants and orderlies.

Telemedicine personnel also had cost savings. For example, they had no travel time or expenses.

Patient Comments re: Telemedicine

- They experienced less stigma using Telemedicine because they did not have to undergo public exposure while traveling to and waiting for their appointment.
- Patients were impressed by the ease with which the encounter could be achieved.
- Encounters occurred in patient homes, offices, automobiles, airplanes, in-hospital, both inside or outside buildings, and while patients were on vacation or in remote areas.
- Many said they felt more connected, given the ease of making appointments for Telemedicine that involved no travel time.
- Only one patient insisted upon being seen always in person.

Bullet Points to take from talk:

- We studied 974 HIV-patient encounters during the COVID-19 pandemic, 670 were Telemedicine and 304 in-person.
- Telemedicine clinics are more effective than traditional Brick-and-Mortar clinics in achieving sustained viral control.
- Telemedicine is more cost-effective and has better time-efficiency.
- Patient and clinic employee personal expense was minimal with Telemedicine.
- Patients felt less stigmatized using Telemedicine.
- Outpatients overwhelmingly chose to attend the more effective and time-efficient Telemedicine clinics over Brick-and Mortar clinics.

Hurdles in Implementing Telemedicine

- Many additional services had to be shifted to suit a distant physical relationship with patient
- These include:
 - Bloodwork
 - Additional sexually transmitted infection (STI) evaluations
 - Vaccinations/injections
 - Medication acquisition
 - Accommodating available technologies



Hurdles: Bloodwork

- Quality HIV care involves checking numerous possible labs
 - Chief among them, HIV RNA
- Possible options for patients unable/unwilling to go to a local lab
 - Getlabs
- Essential labs?
 - Recent HIV guideline updates decrease frequency of many recommended labs
 - Forthcoming study evaluating further interval increases in checking some values



Hurdles: STI Evaluations

Quality care involves checking all sites of exposure

Oral/rectal

This is accomplished by manually collecting from these sites

Most labs in AZ do NOT offer this service and samples must be dropped off

Studies performed to evaluate efficacy of self-collection

Kits prepared and mailed out to patient homes



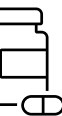
Hurdles: Medication Acquisition

- During height of COVID-19 pandemic, HIV guidelines recommended mail order/delivery use if possible
- Existing partnership with specialty pharmacies enabled quick delivery
 - Mail order/courier services available
- In many cases, same day delivery possible depending on need/location



Hurdles: Accommodating Available Technologies

- Contacting patient prior to visit and preparing them
 - Apps to download
 - What to expect prior to first telehealth visit
 - Answering questions and assessing any additional communication needs
- Local networks utilized to provide patients with devices
- Having an individual on team familiar with all technologies involved



Things Learned from Pandemic Telemedicine

- Finding a communication medium that is simple to use for both sides
- Having alternate plans in place for technology disruptions
- Vital to have a team supporting your endeavors
- Be prepared, set priorities/expectations, remain flexible



QUESTIONS



Improving Access to Quality Medical Care Webinar Series

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Your opinion is valuable to us.
Please participate in this brief survey:

<https://www.surveymonkey.com/r/CMEJan25ATPSWTRC>

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